

AMENDMENTS TO THE CLAIMS

The listing of claims below replaces all prior versions and listings of claims.

Claim 1. (currently amended) A computer-implemented database system, including:

an exemplar object within the database configured to accept and store a plurality of exemplar cases, where the exemplar cases each comprise a known problem and a corresponding solution;

a target object within the database configured to accept and store a target case, where the target case comprises an actual problem; and

a comparison object within the database for comparing the target case with the plurality of exemplar cases.

Claim 2. (original) The database system of claim 1 where the exemplar object includes an attribute of a schema; and

the comparison object includes a method of the schema.

Claim 3. (original) The database system of claim 2 where the schema includes a user defined type.

Claim 4. (original) The database system of claim 3 where the user defined type is implemented using an object relational database.

Claim 5. (original) The database system of claim 1 where the target object includes an attribute of a schema.

Claim 6. (original) The database system of claim 5 where the schema includes a user defined type.

Claim 7. (original) The database system of claim 6 where the user defined type is implemented using an object relational database.

Claim 8. (original) The database system of claim 1 where the exemplar object includes a database table; and
the target object includes a database table.

Claim 9. (original) The database system of claim 1 where the comparison object includes a macro.

Claim 10. (original) The database system of claim 1 further including a means of grouping exemplar cases into domains, where the exemplar case may be a member of more than one domain.

Claim 11. (original) The database system of claim 10 further including a user interface allowing the pruning of domains to exclude from comparison with the target case.

Claim 12. (original) The database system of claim 1 where the target case includes a target feature; and
the exemplar case includes an exemplar feature.

Claim 13. (original) The database system of claim 12 further including a user interface allowing population of the target feature.

Claim 14. (original) The database system of claim 12 further including a user interface allowing population of the exemplar feature.

Claim 15. (original) The database system of claim 12 where the comparison object includes a user defined function.

Claim 16. (original) The database system of claim 15 where the user defined function calculates a similarity metric representing the similarity between the target feature and the exemplar feature.

Claim 17. (original) The database system of claim 16 where the user defined function performs mathematical operations to determine the similarity metric.

Claim 18. (original) The database system of claim 16 where the user defined function, in calculating the similarity metric, determines the relationships between nodes representing the target feature and the exemplar feature in a hierarchical structure.

Claim 19. (original) The database system of claim 16 where the target case includes a plurality of target features and each exemplar case includes a corresponding plurality of exemplar features; and

the user defined function compares the target case with each of the exemplar cases, and determines an overall match factor for each comparison.

Claim 20. (original) The database system of claim 19 where the user defined function determines the overall match factor by computing similarity metrics by comparing each target feature in the target case with the corresponding exemplar feature in an exemplar case; and

summing the similarity metrics.

Claim 21. (original) The database system of claim 19 where the user defined function determines the similarity metrics by comparing each target feature in the target case with the corresponding exemplar feature in the exemplar case;

the user defined function creates a weighted similarity metric by multiplying the similarity metrics by a weight associated with that similarity metric;

the user defined function determines the overall match factor by summing the weighted similarity metrics.

Claim 22. (original) The database system of claim 15 where the user defined function indirectly recognizes the similarity between the target and exemplar case.

Claim 23. (original) The database system of claim 15 where the user defined function is aware of features which are indicative of a finding; and

the user defined function will recognize that the target case possesses the feature indicative of the finding exemplified by the exemplar case, even when the exemplar case lacks that feature.

Claim 24. (original) The database system of claim 15 where the user defined function is aware of features, the lack of which are indicative of a finding; and
the user defined function will recognize that the target case lacks a feature, the lack of which is indicative of the finding exemplified by the exemplar case, even when the exemplar case possesses that feature.

Claim 25. (currently amended) A computer-implemented method for implementing a case-based reasoning system including:

comparing a target case with a plurality of exemplar cases within a database to produce similarity metrics, wherein the target case comprises an actual problem and each of the exemplar cases comprise a known problem and a corresponding solution; and
determining the similarity between the target and exemplar cases based on the similarity metrics.

Claim 26. (original) The method of claim 25 where comparing includes not spawning a process external to the database.

Claim 27. (original) The method of claim 25 where comparing includes not running an external program.

Claim 28. (original) The method of claim 25 where comparing includes using a user defined function of the database.

Claim 29. (original) The method of claim 25 where comparing includes determining which of the exemplar cases best matches the target case.

Claim 30. (currently amended) A computer-implemented method for implementing a case-based reasoning database function, where the method includes:

accepting a target case for comparison, where the target case comprises an actual problem; and

comparing, within the database, the target case with a plurality of the exemplar cases stored in the database, where the exemplar cases each comprise a known problem and a corresponding solution.

Claim 31. (currently amended) A computer-implemented method for implementing a case-based reasoning system including:

- accepting information representing a target case, where the target case comprises an actual problem;

- accepting weights to apply to a set of respective similarity metrics;

- accepting the number of closest matching exemplar cases the user wants to review, where the exemplar cases each comprise a known problem and a corresponding solution;

- formulating and executing, within the database, a comparison between the target case and the exemplar cases yielding the similarity metrics for that exemplar case;

- deriving an overall match factor for each of the exemplar cases from the similarity metrics, weighed by their weights; and

- reporting one or more of the closest matching exemplar cases.

Claim 32. (currently amended) A computer-implemented database system for accessing a database, the database system including:

- a massively parallel processing system including one or more nodes;

- a plurality of CPUs, each of the one or more nodes providing access to one or more CPUs;

- a plurality of virtual processes each of the one or more CPUs providing access to one or more processes;

- each process configured to manage data stored in one of a plurality of data-storage facilities;

- a case-based reasoning system including:

- an exemplar object within the database configured to accept and store a plurality of exemplar cases such that they are distributed evenly among the data storage facilities and where the exemplar cases each comprise a known problem and a corresponding solution;

- a target object within the database configured to accept and store a target case, where the target case comprises an actual problem; and

- a comparison object within the database for comparing the target case with the plurality of exemplar cases.